

What is claimed:

1. A method of assessing whether a subject is afflicted prostate cancer, the method comprising comparing:
 - a) the level of expression of a marker in a sample from a subject, wherein the marker is selected from the group consisting of one or more ID markers, and
 - b) the normal level of expression of the marker in a control sample, wherein a significant difference between the level of expression of the marker in the sample from the subject and the normal level is an indication that the subject is afflicted with prostate cancer.
2. The method of claim 1, wherein the marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.
3. The method of claim 1, wherein the sample comprises cells obtained from the subject.
4. The method of claim 3, wherein the cells are collected from the prostate gland.
5. The method of claim 3, wherein the cells are collected from blood.
6. The method of claim 1, wherein the level of expression of the marker in the sample differs from the normal level of expression of the marker in a subject not afflicted with prostate cancer by a factor of at least about 2.
7. The method of claim 1, wherein the level of expression of the marker in the sample differs from the normal level of expression of the marker in a subject not afflicted with prostate cancer by a factor of at least about 3.
8. The method of claim 1, wherein the level of expression of the marker in the sample is assessed by detecting the presence in the sample of a protein corresponding to the marker.

9. The method of claim 8, wherein the presence of the protein is detected using a reagent which specifically binds with the protein.

10. The method of claim 9, wherein the reagent is selected from the group consisting of an antibody, an antibody derivative, and an antibody fragment.

5 11. The method of claim 1, wherein the level of expression of the marker in the sample is assessed by detecting the presence in the sample of a transcribed polynucleotide or portion thereof, wherein the transcribed polynucleotide comprises the marker.

12. The method of claim 11, wherein the transcribed polynucleotide is an mRNA.

13. The method of claim 11, wherein the transcribed polynucleotide is a cDNA.

10 14. The method of claim 11, wherein the step of detecting further comprises amplifying the transcribed polynucleotide.

15 15. The method of claim 1, wherein the level of expression of the marker in the sample is assessed by detecting the presence in the sample of a transcribed polynucleotide which anneals with the marker or anneals with a portion of a polynucleotide, wherein the polynucleotide comprises the marker, under stringent hybridization conditions.

16. The method of claim 1, further comprising comparing:

a) the level of expression in the sample of at least two ID markers independently; and

20 b) the normal level of expression of at least two ID markers in samples of the same type obtained from control subjects not afflicted prostate cancer,

wherein the level of expression of more than one of the markers is significantly altered, relative to the corresponding normal levels of expression of the markers, is an indication that the subject is afflicted prostate cancer.

17. A method for monitoring the progression of prostate cancer in a subject, the method comprising:

a) detecting in a subject sample at a first point in time, the expression of a marker, wherein the marker is selected from the group consisting of the markers ID-1 and ID-3 or a combination thereof;

b) repeating step a) at a subsequent point in time; and

c) comparing the level of expression detected in steps a) and b), and therefrom monitoring the progression of prostate cancer in the subject.

18. The method of claim 17, wherein marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.

19. The method of claim 17, wherein the sample comprises cells obtained from the subject.

20. The method of claim 19, wherein the cells are collected from the prostate gland.

21. The method of claim 19, wherein the cells are collected from blood.

22. A method of assessing the efficacy of a therapy for inhibiting prostate cancer in a subject, the method comprising comparing:

a) expression of a marker in the first sample obtained from the subject prior to providing at least a portion of the therapy to the subject, wherein the marker is selected from the group consisting of the markers ID-1 and ID-3, and

b) expression of the marker in a second sample obtained from the subject following provision of the portion of the therapy,

wherein a significantly enhanced level of expression of the marker in the second sample, relative to the first sample, is an indication that the therapy is efficacious for inhibiting prostate cancer in the subject.

23. A method of assessing the potential of a test compound to trigger prostate cancer in a cell, the method comprising:

a) maintaining separate aliquots of cells in the presence and absence of the test compound; and

b) comparing expression of a marker in each of the aliquots, wherein the marker is selected from the group consisting of the markers ID-1 and ID-3,

wherein a significantly reduced level of expression of the marker in the aliquot maintained in the presence of the test compound, relative to the aliquot maintained in the absence of the test compound, is an indication that the test compound possesses the potential for triggering prostate cancer in a cell.

24. A method of treating a subject afflicted with prostate cancer, the method comprising delivering an ID protein to cells of the subject.

25. A method of treating a subject afflicted with prostate cancer, the method comprising expressing a marker in the cells of a subject wherein the marker is selected from the group consisting of ID-1 and ID-3.

26. A method for identifying a compound useful for treating prostate cancer, comprising:

a) measuring the expression level of a marker selected from the markers ID-1 and ID-3 in a cell in the presence of a test compound; and

b) comparing the expression measured in step a) to the expression of a marker selected from the markers ID-1 and ID-3 in a cell in the absence of the compound,

wherein the compound is useful for treating prostate cancer when the expression level of a marker selected from the markers ID-1 and ID-3 in the presence of the test compound is higher than its expression level in the absence of the test compound.

27. The method of claim 26, wherein the expression level is determined by measuring the levels of mRNA of a marker selected from the markers ID-1 and ID-3.

28. The method of claim 26, wherein the expression level is determined by measuring the levels of the protein of a marker selected from the markers ID-1 and ID-3.

29. The method of claim 26, wherein the cell is a prostate cancer cell.
30. A method for identifying a compound useful for treating prostate cancer, comprising
- a) measuring an activity of a marker selected from the markers ID-1 and ID-3; and
- 5 b) comparing the activity measured in step a) to the level of activity of a marker selected from the markers ID-1 and ID-3 in the absence of the test compound, wherein the compound is useful for treating prostate cancer when the activity of a marker selected from the markers ID-1 and ID-3 in the presence of the test compound is higher than its activity in the absence of the test compound.
- 10 31. The method of claim 30, wherein the cell is a prostate cancer cell.
32. A method of treating prostate cancer in a patient, comprising administering to the patient a compound which increases the expression of a marker selected from the markers ID-1 and ID-3.
33. The method of claim 32, wherein the compound increases expression of mRNA of a marker selected from the markers ID-1 and ID-3.
- 15 34. The method of claim 32, wherein the compound increases expression of the marker protein selected from the markers ID-1 and ID-3.
35. A method for determining the efficacy of androgen withdrawal treatment in a subject afflicted with prostate cancer, comprising:
- 20 a) detecting in a subject sample at a first point in time, the expression level of a marker, wherein the marker is selected from the group consisting of ID-1 and ID-3;
- b) repeating step a) at a subsequent point in time occurring after the subject begins androgen withdrawal treatment; and
- 25 c) comparing the level of expression of markers detected in steps a) and b), wherein a increase in the level of expression indicates that the androgen withdrawal treatment has decreased efficacy.